AIR COMMAND AND STAFF COLLEGE AIR UNIVERSITY

AN EXPLORATION OF ADVANCED DISTRIBUTED LEARNING SERVICE SUCCESS MEASURES FOR SOCIAL POLICY

by

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14 ABSTRACT

Since the turn of the century, the military has leveraged computer networks and online media to modernize its training capabilities. Goals of this effort have been to create interoperable reusable learning content, promote widespread collaboration, lower development costs, and provide the ability to deliver efficient and effective high-quality learning anytime, anywhere. The Air Force has used its web-based online training system, the Advanced Distributed Learning Service (ADLS), to train and track a number of social policy topics such as the Law of Armed Conflict, ethics training, violence prevention, etc. This research attempts to provide an overall assessment of whether ADLS is efficient and effective with regard to social policy training goals. Research uncovered that while authority mandates are being met, Air Force ADLS implementation is probably hampering social policy learning. Currently, social policy is marginalized by an organizational focus on technology and management efficiencies over effective learning outcomes. Other problems include disorganized presentation, strategic leadership deficiencies, and organizational culture barriers. On a positive note, recent Air Education and Training Command objectives appear to trend toward an increased emphasis on the learners perspective. This research presents two paradigms, the Social Policy Kill Chain and the Learner in the Loop, to help identify and balance Air Force organizational and learner perspectives and needs. Practical recommendations for social policy training process improvement and further research are provided.

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Preface

My first impression after being placed in the DoD Social Policy Perspectives 2010 research elective at ACSC was, "What have I gotten myself into?" Now, in retrospect, I'm very happy to have stuck with it despite initial thoughts of switching seminars and subsequent squirming during discussions outside my normal comfort zone.

My thanks go to my advisors, Lt Col Parco and Lt Col Jenkins, for making the elective and associated research an interesting and rewarding experience. I'm grateful for the care in instruction and facilitation, concern for student welfare, and personalized feedback they've provided in the last year.

I offer my sincere appreciation to AETC and the ADLS program office for their cooperation in answering my questions, sharing historical perspectives, and supplying background for my research.

I would also like to thank Sumanth, the Microsoft technician from India, who recovered a critical corrupted document and saved me a lot of work. His skillful assistance professionally rendered during a stressful time was great.

Finally, and most importantly, I owe a huge thank you (and more than a little extra family time) to my wonderful, wonderful wife and two boys for putting up with me during the research and writing of this paper. Without their unconditional love and support, this effort would not have been possible.

Abstract

Since the turn of the century, the military has leveraged computer networks and online media to modernize its training capabilities. Goals of this effort have been to create interoperable reusable learning content, promote widespread collaboration, lower development costs, and provide the ability to deliver efficient and effective high-quality learning anytime, anywhere. The Air Force has used its web-based online training system, the Advanced Distributed Learning Service (ADLS), to train and track a number of social policy topics such as the Law of Armed Conflict, ethics training, violence prevention, etc. This research attempts to provide an overall assessment of whether ADLS is efficient and effective with regard to social policy training goals.

Research uncovered that while authority mandates are being met, Air Force ADLS implementation is probably hampering social policy learning. Currently, social policy is marginalized by an organizational focus on technology and management efficiencies over effective learning outcomes. Other problems include disorganized presentation, strategic leadership deficiencies, and organizational culture barriers. On a positive note, recent Air Education and Training Command objectives appear to trend toward an increased emphasis on the learner's perspective.

This research presents two paradigms, the Social Policy Kill Chain and the Learner in the Loop, to help identify and balance Air Force organizational and learner perspectives and needs.

Practical recommendations for social policy training process improvement and further research are provided.

Introduction

Efficiency is doing things right. Effectiveness is doing the right things.

—Peter Drucker

Efficiency tends to deal with Things. Effectiveness tends to deal with People.

We manage things, we lead people.

—Unknown

Research Origins

This research paper was born out of my interest of how ideas and social values are transferred, processed, internalized, and acted on in terms of behavior. I was also curious if technology was being used effectively to meet social policy objectives. Specifically, my research targets social policy training as provided by the Air Force's online training system, the Advanced Distributed Learning Service (ADLS). As an Air Force communications officer and previous squadron commander, I have had first-hand experience with leveraging technology, organizational command and control, and balancing mission and individual needs. I know there is a strong lure to use technology to gain efficiencies and productivity and do more with less at a faster rate. The Air Force is using ADLS to do this. But are we being efficient without being effective? Is this technology empowered acceleration serving the purposes of spreading and strengthening social policy messages and values? Or are the messages getting lost in the shuffle? Does the Air Force need to approach learning about human interactions differently? How? This research looks to assess the capabilities and implementation of ADLS training with regard to social policy training goals (desired efficiency and effectiveness).

Research Questions, Methodology, and Assumptions

My overarching research question is: "Is ADLS efficient and effective with regard to Air Force social policy goals?" Associated nested and follow-on research questions are described in Table 1:

Table 1: ADLS Social Policy Learning Research Vectors

Question	Description of Research Effort
"What social policy training and education is being provided on ADLS?"	The existing state of ADLS social policy training and education is captured.
"What are general Air Force ADLS social policy goals with regard to training and education?"	Air Force ADLS social policy participants, motivations, objectives, and views of success are explored.
"What are social policy learning challenges?"	Challenges for Air Force desired learning ends, ways, and means are identified.
"How can social policy learning be considered?"	Paradigms of social policy training are proposed.
"How can social policy learning be evaluated?"	The measurement of efficiency and effectiveness with regard to ADLS social policy learning is analyzed.
"What are best ways to address ADLS social policy learning?"	Best practitioner approaches to Air Force social policy learning challenges and recommendations are presented.

Research Boundaries

ADLS social policy data was collected via various archival sources, scholarly work, government documents, online public record, and interviews. This research focused on the ADLS site (https://golearn.csd.disa.mil/kc/login/login.asp) and the Education and Training Course Announcement (ETCA) site (https://etca.randolph.af.mil/) as of the cutoff date 21 January 2009. Changes to these sites after this date were not considered. Course content provided on ADLS was considered "training" for the purposes of this research; no attempt to

delineate online "training" from "education" was made. In addition, since this research was a holistic analysis, it focused on assessment breadth as opposed to depth. Assessment of ADLS multimedia content was performed on an aggregate not an individual basis. Sister service and future Air Force web-based training and education efforts are noted, but not fully explored as subject under study.

Research Relevance

So, why should you care about this research?

First of all, Air Force social policies are important. They reflect organizational standards of conduct, core values, and service identity. In addition, controversial social policy issues continue to be a hot button for DoD organizations, leadership, and policy makers. Social policies steer individual and organizational understandings, culture, and behaviors. Highly damaging institutional and personal embarrassment and scandal can follow from misunderstanding and mismanagement of social policies. In short, how social issues are trained and learned is very important. Valid assessment of training effectiveness and efficiency from organizational and learner perspectives is crucial.

Second, it appears that ADLS social policy learning, organizational implementation, and learner value is out of balance. There seems to be tension between an organizational emphasis for efficiency in training that is faster to complete and the slower development of educational relationships, trust, and exposure needed for personnel to internalize social policy messages as valuable and useful. That is, a member may not be motivated or able to internalize social policy information and values to truly change their behavior when only presented material once a year for less than 30 minutes from an online learning site. Air Force expectations of ADLS training

effectiveness for modifying personnel awareness and behavior regarding social policy issues should reflect this.

Finally, research has been requested in this area. A 2008 Air Education and Training Command (AETC) whitepaper recommended further investigations on training and learning concepts:

"Conduct fast track studies and reports done by Air War College, Air Command and Staff College, the Air Force Institute of Technology, and other organizations and individuals to further refine and explore these concepts and associated capability requirements. Of primary importance are studies that focus on the proper application of a spectrum of media to enhance learning and appropriate use of live, virtual, and constructive environments."

Successful implementation of social policy learning is in the Air Force's best interests. There is an apparent need and documented desire for research regarding ADLS training, education, learning and the learner, effectiveness, and efficiency. Research in these areas appears to be relevant.

Background

To better understand the nature of organizational and individual relationships involved with social policy training via ADLS, a brief review is warranted. This background will set the stage for later analysis of ADLS efficiency and effectiveness as a social policy learning tool.

Synopsis of E-Learning for DoD

Since the advent of the computer revolution and the World Wide Web in the 1980's, American society has attempted to harness the power of electronic media to become more effective and efficient. Organizations have found that electronic training and education accomplished by individuals over the web can provide powerful tools. Benefits include quick development, wide dissemination, and lower costs allowing a larger user base than classroom settings.

The Department of Defense (DoD) also wanted to capitalize on the benefits of information technology. At the end of the 1990's, the DoD began to fully embrace a military strategy to "use learning and information technologies to modernize education and training." DoD goals were specified to use technology to deliver efficient and effective results:

"In short, the strategy is to: pursue emerging network-based technologies; create common standards that will enable reuse and interoperability of learning content; lower development costs; promote widespread collaboration that can satisfy common needs; enhance performance with next-generation learning technologies; work closely with industry to influence the COTS product development cycle; and establish a coordinated implementation process. It is designed to deliver efficient and effective high-quality learning continuously to Department of Defense personnel *anytime anywhere*. As shown [in figure] implementation will yield the desired end-state, the DoD Advanced Distributed Learning System (ADLS)."

Figure 1 shows the DoD plan to transition to advanced distributed learning.

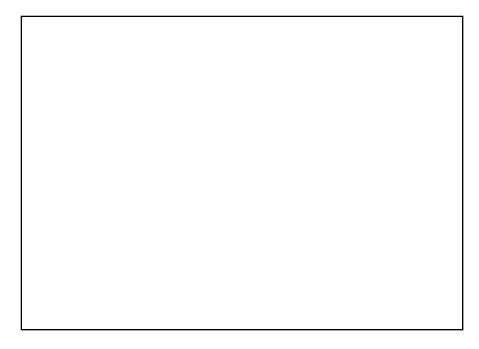


Figure 1: The DoD Advanced Distributed Learning System Continuum/Architecture (Reprinted from DoD Strategic Plan for Advanced Distributed Learning, Washington, DC: Under Secretary of Defense for Readiness and Training, 10.)

In addition to visions of improved learning capabilities and technological efficiencies, the DoD was given a presidential mandate to develop federal interoperable, reusable distance learning software standards.⁴ In the last decade, the military's modernization efforts toward leveraging technology in training and education have shown powerful efficiencies and a rapid increase in online advanced distributed learning.

Progression of Advanced Distributed Learning Service (ADLS)

Since January 2000, the Air Force has greatly expanded its web-based online learning through the use of ADLS.⁵ Operationally, the ADLS program currently has over 850,000 registered users with over 900 courses online or in production. More than eight million courses have been completed since ADLS went live. Over half of those were completed in 2008 alone. Operational usage has been consistent and climbing (as shown in Figure 2). Despite this

explosive growth, ADLS is touted as "ready and able to meet current and future capacity needs."

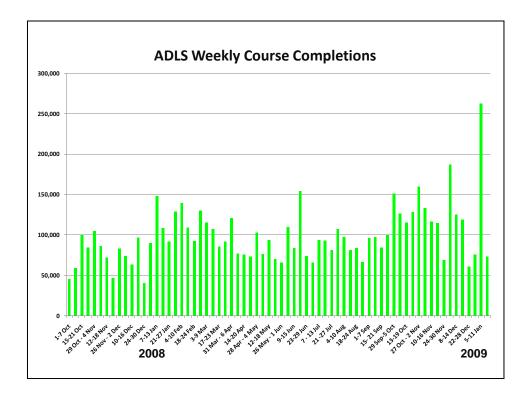


Figure 2: ADLS Weekly Course Completions

(Reprinted from "Advanced Distributed Learning Service...into the Future" brief given at AETC Symposium, 15-16 Jan 2009, slide 9.)

Air Force training using ADLS is decentralized in both course creation and execution. The ADLS program office hosts, but does not create course content. ADLS training and education material is decentralized to Air Force functional managers who create and manage what is taught and how it is presented. The ADLS program office acts as a clearing house and distribution point for developed training courses. ADLS provides online training delivery in the following areas: Type 6 Tech Training, AF Ancillary, Deployment Readiness, Language and Culture, CDCs [Career Development Course], PME [Professional Military Education], and Functional Specific.⁷ ADLS also provides online access, situational awareness, and training tracking for AF personnel and leadership. Mandatory training requirements are levied on Air Force personnel who have a personalized ADLS transcript that details their training, status

(current or non-current), and completion history (when last completed). Management of personnel training is delegated to commanders and training managers at unit level who track their personnel and, if necessary, provide positive encouragement/negative consequences to ensure training completion.

Social Policy Content on ADLS

What is social policy? A simplistic explanation is policy dealing with human interactions. My research found no well-established definition for "social policy" but has adapted one from online sources:⁸

SOCIAL "Relating to vision or direction for the changing, maintaining, or creating social, **POLICY**: working, or living conditions to promote better human welfare. Social policy is public policy dealing with social issues."

In recent years, ADLS has been used to provide web-based development regarding a number of DoD social policy issues such as equal opportunity, DoD homosexual policy, the No FEAR Act, human persons trafficking, suicide awareness, and violence prevention. As of 21 Jan 2009, this research identified 14 ADLS training and course offerings that were considered related to social policy. These courses fell into four ADLS description categories.

Eight courses were categorized as **DEOMI** (standing for Defense Equal Opportunity Management Institute): Communication Skills, Conflict Management, Cross-Cultural Communication, Effective Feedback, Ethical Decision-making, Group Development Theory, Perceptions, and Socialization.

Three courses were categorized as **Miscellaneous**: Annual Ethics Training for OGE 450/SF 278 Filers, Law of Armed Conflict, and the No FEAR (Notification and Federal Employee Anti-discrimination and Retaliation) Act Training.

One course was categorized as **Total Force Awareness Training**. Human Relations is a combination of three courses previously offered as Combating Trafficking in Persons, Suicide Awareness, and Violence Prevention.

Two courses were categorized as **All Courses** and were not offered under any individual ADLS category: Homosexual Policy Training for CCs, JAs, and SF Personnel and Homosexual Policy for Managers. (Note for non-military readers: CCs = Commanders; JA = Judge Advocate; SF = Security Force).

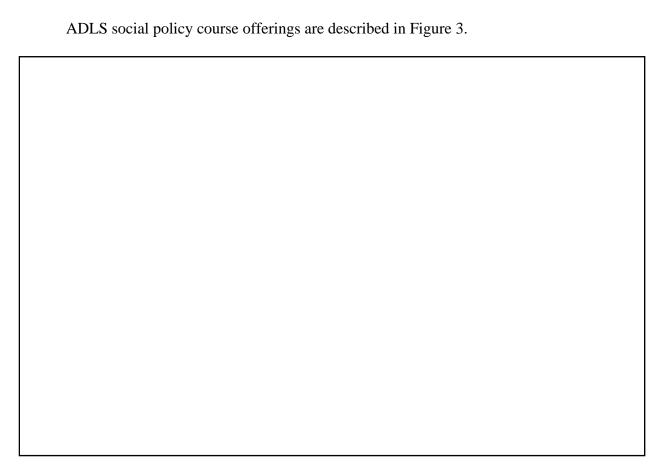


Figure 3: ADLS Social Policy Course Offering by ADLS Categories

ADLS courses regarding social policy material, those dealing with social issues or human interactions, will serve as the research data to be examined and analyzed. By examining the

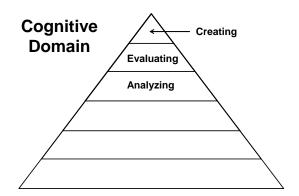
ADLS course material in context with Air Force organizational and learning objectives, an assessment of ADLS efficiency and effectiveness can be made.

Learning as Related to Social Policy

Since ADLS is used to provide training on social policy, it is appropriate to review some related learning theory. Later research analysis assessing ADLS with regard to Air Force social policy purposes will use this learning theory to ground assessments, judgments, and conclusions. As such, background is provided on cognitive and affective learning, organizational culture impact to learning, and multimedia learning theory.

Domains of Learning

Studies by psychologists done in the 1950s and later updated in the 1990s classified different types and levels of learning. The best known, Bloom's Taxonomy, asserts that there are three overlapping domains of learning: cognitive, dealing with the processing of knowledge; affective, involving the processing of values, emotions, attitudes, or motivation; and psychomotor, involving learning motor skills. Each domain of learning has a hierarchy of development. While cognitive studies have received most of the attention and application in learning venues, it is important to note that learning about social issues and human interaction involves both cognitive and affective processing. On a personal level, social policy training involves information transfer leading to knowledge, but also perception, motivation, feelings, and incorporation of values. While affective processing is not understood as well as cognitive processing, emotional response is considered a key to "messages that stick." It is important that evaluation of training of social policy assess success in both types of learning. Figures 4 and 5 illustrate learning hierarchies for the cognitive and affective domains.



Affective Domain

Characterizing by
Value or Value Content
Organizing and
Conceptualizing
Valuing

Figure 4: Taxonomy of Cognitive Domain (Adapted from Anderson & Krathwohl, A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.

New York, NY: Longman, 2001)

Figure 5: Taxonomy of Affective Domain (Adapted from Krathwohl, Bloom, & Masia, *Taxonomy of Educational Objectives: The Classification of Educational Goals – Handbook II: Affective Domain.* New York, NY: David McKay, 1964)

Organizational Culture Impact to Learning

Social policy training effectiveness is greatly impacted by organizational culture in how the training is perceived (valued or not) and executed (treated in terms of attention and resources). In the last twenty years, the concept of organizational culture has gained acceptance as a way of understanding human interactions and behavior from a systems perspective. Edgar Schein, a respected organizational culture theorist, noted, "Culture is an abstraction, yet the forces that are created in social and organizational situations that derive from culture are powerful. If we don't understand the operation of these forces, we become victim to them."

He holds that behavior in organizations can be tied to underlying values and shared assumptions of members, which are often unconscious and unstated. What top leaders pay attention to, reward, and measure ultimately has great impact on organizational member activity and behavior. Schein posits that leadership and culture are "two sides of the same coin" and that one of the most decisive functions of leadership is in the creation, management, and if necessary, destruction of cultures in organizations.

Multimedia Learning

ADLS uses multimedia to provide training on social policies. Multimedia has been defined as "the combination of various media types, such as text, images, sound, and video, into an integrated multisensory interactive application or presentation to convey a message or information to an audience." Research has shown types and methods of media presentation such as text, graphics, and sound can greatly affect learning according to a targeted audience. Also, a learner's ability to interact within their online environment, control their own learning, and provide feedback all add to a positive learning experience. See Figures 6 and 7.

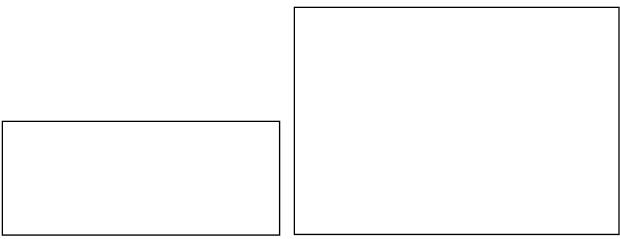


Figure 6: Learning as Info Transfer

Figure 7: Learning as a Complex Integrative Process Transfer

(Reprinted from Patti Shank, "The Value of Multimedia in Learning," website from Adobe Design Center, http://www.adobe.com/designcenter/thinktank/valuemedia/The_Value_of_Multimedia.pdf)

In the end, effectiveness in multimedia learning does not consist of using multiple media together, but "combining media mindfully in ways that capitalize on the characteristics of each individual media and extend and augment the learning experience."

Analysis

We shape our tools and afterwards our tools shape us.

— Marshall McLuhan

Not everything that counts can be counted, and not everything that can be counted counts.

— Albert Einstein

The following analysis assesses the efficiency and effectiveness of ADLS in light of social policy participants, their objectives, and measures of success. A simplistic assessment of ADLS is difficult because success is relative. Social policy makers, the Air Force organization, the ADLS mechanism, and learners have different measures of success. They interact in various ways within their technology, operational, cultural, and fiscal environments and constraints. Figure 8 shows that what is considered ADLS success, in terms of effectiveness and efficiency, may differ substantially based on perspective and goals of the participant.

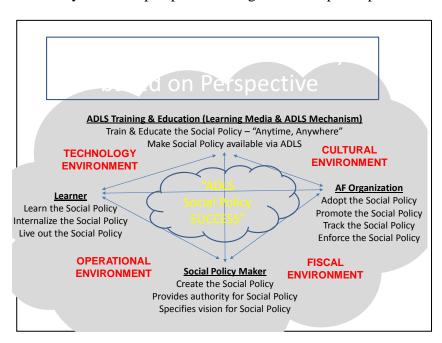


Figure 8: Perspectives of ADLS Social Policy Success

State of Social Policy Training on ADLS

This research attempted to discern social policy maker goals and requirements for the 14 ADLS course offerings that were associated with Air Force social policy. Additionally, each of the offerings was judged by the researcher to be effective or not in meeting the policy maker letter of the law requirements or mandates with regards to training. To do this, original social policy directives were researched to determine policy maker training standards and parameters (i.e., what kind of training was required, how often training is needed, competence required). Summary analysis tables of ADLS social policy training participants, content, goals, requirements, and effectiveness assessment are found in Appendix A. My finding is that while policy authority mandates are being met, Air Force training on social policy in its current state is being hampered by overemphasis on efficient output based on training completion over effective outcomes based on competence or results. Other problems include disorganized presentation and deficiencies in strategic leadership, organizational culture barriers, and an overriding focus on technology. A new focus by AETC and ADLS on learning and the learner may address some of these shortfalls.

Overemphasis on Efficient Output over Effective Outcomes

Policy makers differ for the various social issues currently trained on ADLS, but include high national authorities including the President, Congress, and the Secretary of Defense. After examination of all the social policy mandates found within ADLS training directives, it is very apparent that social policy makers have given the Armed Forces, and in this case the Air Force, wide latitude in how training is presented and measured. That military services are responsible for their own training is appropriate per military doctrine.¹⁸ However, the only consistent strict requirement for social policy training is that it be performed at specified intervals. Social policy

training mandates had little to no requirements for any form of demonstrated competence or learning by the trainee. The most stringent requirement came from a Law of Armed Conflict training call for "instruction to the point of familiarity for all ranks and positions." Only 2 of 14 training courses (Law of Armed Conflict and No FEAR Act training) required any kind of competency test for successful completion. But even these courses required only a 70% pass rate and there was no penalty for rapid/numerous test retakes. This strong emphasis on social policy training frequency and completion over trainee competence seems to create an unintended consequence. Organizational focus is on tracking completed training rather than ensuring personnel learn social policy material. Organizational efficient output, Air Force members that have completed training on a recurring basis, is trumping effective outcomes, Air Force members that are competent on social policy issues.

This current emphasis on efficient output over effective outcomes is shown through what the Air Force measures as standards of success or effectiveness. The adage "you measure what you care about" applies here. The Air Force as a military service is liable to various social policy authorities for meeting their required frequency mandates for completed training. As a result, tracking and documentable evidence of training completion is a priority for the Air Force—so a true statement can be made: "Air Force personnel are fully trained on [specific social policy]." ADLS performs this role nicely extending online training across the Air Force, tracking individual training deadlines, and documenting training completion. Currently, social policy training collects completion data, which is easy to measure. From personal experience, at the squadron level, unit social policy training completion metrics are normally captured under ancillary training completion rate statistics. Since squadron commanders and individual members face possible negative attention, consequences, and discipline if ancillary training rates

documenting completion is low, there is strong motivation to complete training within set deadlines. This organizational decentralized drive to ensure training completion output has been called "chasing the green" referring to the green color usually associated with positive metrics. In the end, the apparent focus on social policy training completion is understandable in terms of Air Force need to meet policy maker mandates, ease of organizational measurement, and unit/individual desire for positive metrics.

Besides completion, what else would provide measures of value for assessing training on Air Force social policy issues? Social policy training can be measured in two domains from Bloom's Taxonomy: cognitive and affective learning. To be sure, measures of cognitive learning should gauge competence of a learner's understanding of social policy concepts and terminology providing common language and frames of reference for real world situations. Measurement of affective learning is a harder target; motivation, awareness, interest, and emotional measures are notably problematic due to their personal nature. Traditional methods of measuring an affective experience can be made unreliable by a member's "awareness of internal state, reflections on how such a report will be perceived, ability to articulate what one feels, and more."20 However, maybe even a small level of affective feedback would allow learners an amount of control and course designers better insight into ways to improve future training experiences. At this time, no social policy training provided on ADLS has any way of providing feedback. In any case, cognitive and affective measures should promote Air Force social policy training that is focused on effective outcomes. Trainees should be provided the best possible training to ensure social policy "street smarts" not just "book smarts" for successful human interactions in the real world.

Also, ADLS social policy training measurements of completion are not tied to real life outcomes or effects at individual or aggregate Air Force levels. That is, at present, this researcher found no evidence of any Air Force attempt to evaluate ADLS social policy training impacts on Air Force social phenomena (e.g., suicide rates, incidents of violence, occurrences of social misbehavior, cases of discrimination). Whether this absence of an ADLS social policy training cause/effect assessment is due to a lack of data or a desire to avoid a spotlight on negative Air Force social measures is unclear. However, social policy makers want successful human interaction in the real world. It is the reason for ADLS social policy training requirements. In this regard, achieving efficiency in training without positive Air Force social policy results in the real world is pointless and, in fact, wasteful.

Disorganized Presentation and Deficiencies in Strategic Leadership

Learning is hampered by how Air Force ADLS social policy training is presented, organized, and executed. Also, a lack of strategic leadership focus appears to neglect or marginalize Air Force social policy messages provided on ADLS.

First of all, the 14 social policy training courses provided by ADLS are scattered in a piecemeal fashion under three different non-descript categories (DEOMI, Miscellaneous, and Total Force Awareness) or, in the case of homosexual policy training, only found in a search under the All Courses listing. In short, social policy training on ADLS is not strategically presented and is hard to find unless one knows where to look. Besides obscuring social policy training locations, category descriptions are deficient. The descriptions, DEOMI, an obscure acronym, and Miscellaneous, referring to generic leftovers, risk marginalizing social policy content messages as unimportant. Words matter. An ADLS "Social Policy" category would clearly and collectively identify content.

Second, ADLS social policy training language can be overly legalistic and controlling at times. While regulation references are occasionally useful in providing authority sources, the danger of presenting social policy training in too rule-based a fashion is that training can be perceived to be an organizational "gotcha" mechanism. That is, there is risk that ADLS social policy messages may not be seen as important learning opportunities or reinforcement of key information, but rather as a form of Air Force behavior control. Language should be carefully tailored and presented in a manner to best promote learning, positive relationships, and Air Force socialization. Messages should inspire positive actions as well as prohibit negative conduct.

Lastly, in terms of organization and execution, the Air Force's ADLS social policy training efforts resemble an assembly line managing a series of tasks rather than our leadership priorities focused on shaping and sustaining individual core values and transforming organizational cultures. The training process is highly delegated, distributed, and decentralized. Social issues are farmed out to various offices of primary responsibility (OPRs). These functional managers provide course content to the ADLS program office which acts as a digital clearing house for distribution and tracking. Self-service online training backed up by unit training apparatus and commander oversight provides a highly decentralized execution mechanism. As long as personnel complete online training at regular intervals, no human contact of any kind is required. This separation of effort approach to managing ADLS social policy training is highly efficient with faster production, less oversight, and self sustainment, but unintentionally demonstrates a lack of leadership focus and priority for social policy messages.

This lack of strategic leadership focus for ADLS social policy training is demonstrated in a number of ways. First of all, Air Force social policy training content and presentations differ greatly in training approach, look, and feel due to various OPRs; there is no one social czar standardizing policy messages or learning format. Training organizations are hierarchical with strategic content, operational distribution, and tactical execution levels that are segmented and do not typically interact or provide feedback in a training transaction. This is not like a chain of command with two-way communication. And, as stated previously, the current organizational focus on measures of completion rather than competence is indicative of a management rather than leadership process.

It is important to realize that social policies reflect our Air Force core values and, as such, must be led, not just managed. Social policy that is only managed marginalizes the importance of the message. Social policies, just like our Air Force core values, serve as a source of identity and worth as well as providing guidance for organizational and individual standards of conduct. They reflect "who we are" and "what we do." Social policies dealing with integrity, trust, cooperation, unity, professionalism, and cohesion buttress the social fabric of Air Force organizations and human interactions. As such, they are critical mission enablers for the Air Force to "fly, fight, and win…in air, space, and cyberspace."

Clearly, the Air Force does care about social policy and human interactions. Existing Air Force strategic planning and leadership messages capture the importance and need to "develop and care for Airmen and their families." The chain of command is fully functional. Development of leaders and followers, mentorship, chaplain outreach to personnel, inspector general investigations and reporting, active Military Equal Opportunity (MEO) programs, and creation of 24/7 on-call Sexual Assault Response Coordinators (SARCs) all demonstrate daily commitment to Air Force personnel and operate according to supporting organizational structures. However, the current decentralized ADLS mechanism for providing homogenous training on service level social issues does not address the proactive leadership required to

positively influence and change organizational culture and individual behavior. Instead, local leadership is entrusted with handling and reacting to issues as they occur.

Organizational Culture Barriers

Organizational culture barriers, whether consciously applied or not, can negatively impact ADLS social policy training effectiveness. Most barriers develop over time as unintended consequences of existing reward/punishment practices, established norms of operations and measurement, and unspoken value systems. Some perceived examples of organizational culture barriers to ADLS social policy training include: 1) "chasing the green", a focus on organization metrics rather than individual learning; 2) expectations to complete training "on your own time", not "recognizing that learning is an official requirement of the duty day" 3; 3) disdain for non-job training, 4 not recognizing the value of social policy training; and 4) treating social policy training like a task, not a process of learning important knowledge and incorporating values. Leadership is needed to change organizational culture to remove barriers to learning.

Overriding Focus on Technology

It has been said that the Air Force worships at the altar of technology.²⁵ Obviously, information technology lends powerful efficiencies to online training like ADLS. However, too much information technology focus can be counterproductive because it monopolizes too much attention on the power of the mechanism rather than the message. The authors of The *Social Life of Information* agree. They say that infoenthusiasts have promoted the power and promise of technology, but have forgotten the important contextual roles of social life, human networks, and cultural institutions. They contend that there is more to information technology advances than processing power and global access:

"We believe that all the hype surrounding the capabilities of information technologies have led us to develop a dangerous form of tunnel vision regarding where the new technologies can take us and so how they should be designed. We've become so focused on driving relentlessly forward, that we have pushed aside all the fuzzy stuff in the periphery—context, background, history, common knowledge, social resources—that helps frame human activities. Though vital to how we all live and work, consideration of things like communities, organizations, and institutions are too often missing from the design stylebooks of the information age." ²⁶

Seen strictly as a technology platform, delivery mechanism, or tool for distributed learning, ADLS appears to work as designed. ADLS social policy training courses appeared effective with regard to multimedia and information presentation. Indeed, course multimedia content was much more dynamic and visually stimulating than previously observed offerings, which were more text based. ADLS, still in a fledgling state, is quickly becoming more sophisticated. However, at this time, from a human factors perspective, there are still major limitations. Training is not interactive. This is a major deficiency since social policy is based on human interactions, and isolated training can quickly become mechanical. Existing ADLS technology only allows trainees to control their learning progress in one direction with limited additional accessible resource material. No means of feedback are provided to learners. In short, while ADLS technology is functional, it is somewhat dehumanizing; improvements are needed to allow a more human experience.

Also, there is evidence to suggest a strong organizational technology bias in expectations of ADLS success criteria and implementation. Figure 12 in Appendix B illustrates DoD technology-centric end state criteria for advanced distributed learning (ADL) systems. Figure 13 in Appendix B illustrates technology-centric DoD views of organizational success (i.e., service capabilities for a successful ADL implementation). Both figures demonstrate measures of success that are couched in technological, as opposed to learning, terms. ADLS end states, cost benefit analysis, assessment of progress, and associated metrics all show this trend. This

overriding technology focus helps explain the previously described Air Force tendency towards resource management rather than treating ADLS social policy training as a leadership enterprise.

Paradigms of Social Policy Training

Two paradigms illustrate extreme approaches to social policy training that require balance in the real world to meet organizational and individual needs: the Social Policy Kill Chain and the Learner in the Loop.

Social Policy Kill Chain

The military has what they call a "kill chain" concept of "target identification, force dispatch to target, decision and order to attack the target, and finally the destruction of the target."27 Beyond the effectiveness of a target "kill," having a fast kill chain with speed of identification, dispatch, decision, and destruction of a target is highly efficient. The Social Policy Kill Chain paradigm parallels this cycle. In this paradigm, online social policy training and tracking mechanisms are focused solely on meeting social policy maker mandates, the organizational "target" for effectiveness. The main effort is to kill the target, complete the training, track it, and declare personnel a "trained" resource. In conjunction, reducing learner training time and training costs to gain efficiency is encouraged. Online social policy training courses incorporate minimal competence or comprehension tests, which allows very rapid web clicks to accelerate training completion. All tests have low passing standards and are easy to accomplish. Organizational management and control mechanisms ensure personnel complete their training on time every time. Individual learning and socio-cultural development is not discouraged, but much more organizational focus is placed on achieving desired personnel behavior through standards of conduct and rule enforcement.

Learner in the Loop

The counterbalance is the Learner in the Loop paradigm. Within this paradigm, the learner is supreme. Organizations spare no expense in providing engaging, personalized, and interactive training resources. Social policy intrinsic values are promoted and learning is stressed as part of professional development. Leaders use enabling technology to create positive learning environments and to simulate real world scenarios. Extensive educational resources are made available for additional self-paced personal development in areas of interest or value to learners.

Clearly, both paradigms are extreme. However, at this time, Air Force implementation of ADLS social policy training appears to be facilitating more of a social policy kill chain than promoting social policy learning. While the existing bias is understood in light of environmental challenges such as dealing with mandates, ops tempo, constrained resources, etc., a change is required. What is needed is a better balance between managing organizational resources and leading a learning enterprise.

Way Ahead for Air Force Learning

The Air Force is already in the process of addressing some of the needed changes. A 2008 AETC whitepaper titled, "On Learning: The Future of Air Force Education and Training," provides a vision of the need for a learning organization culture:

"To achieve cognitive and learning superiority, the Air Force must develop a new learning organization culture. Learning will also focus on the affective domain by developing intellectual skills, knowledge, and attitudes that embrace the Air Force's warrior ethos and core values. Knowledge is power and learning is the means to put this knowledge in the hands of Airmen." ²⁸

Figures 3 and 4 illustrate the shift toward a learner-centric approach.





Figure 3: Future Learning
(Reprinted from AETC whitepaper, On Learning: The Future of Air Force Education and Training, 30 January 2008, 10 and 17 respectively)

Also noted was the need to transform existing Air Force learning to meet tomorrow's challenges:

"To become an agile organization comfortable with continuous improvement and change, the greatest hope for the Air Force is to educate and train Airmen comfortable with continuous and collaborative learning. The skills required for future Airmen to succeed necessitate a transformational shift from *education and training* to a focus on *learning and the learner*." ²⁹

This new AETC and ADLS focus on the learner holds the potential to address noted social policy training shortfalls, restore balance between organizational and individual requirements, and counterweight Social Policy Kill Chain and Learner in the Loop approaches.

Conclusions

This research addressed the research question, "Is ADLS efficient and effective with regard to Air Force social policy goals?" In doing so, this research analyzed the different ADLS social policy participants (social policy makers, ADLS program office, the Air Force as an organization, and the learner) perspectives, motivations, objectives, and views of success. Measures of success for effectiveness and efficiency were determined to be relative to the participant role and ability to work within operational, fiscal, cultural, and technical environments and constraints. Air Force ADLS social policy training offerings were identified, analyzed and found to meet definitive policy maker mandates. But, this researcher asserts that in its current state Air Force training and thus learning on social issues is hampered by overemphasis on efficient output based on training completion over effective outcomes based on Other problems include disorganized presentation and strategic competence or results. leadership deficiencies, organizational culture barriers, and an overriding focus on technology. At present, the Social Policy Kill Chain management paradigm is winning out over a Learner in the Loop leadership and promotion of growth. However, on a positive note, there appears to be a shift by AETC and the ADLS program to increase focus on learning and the learner. Social policy training was deemed a challenging area for the Air Force to address because of multiple learning domains, environmental constraints, and necessity of balancing organizational and individual learner needs.

Research Contributions

This research captured the existing state of ADLS social policy training providing a benchmark for future improvements. Policy maker mandates and training requirements were

investigated with regard to ADLS training. System dynamic descriptions were provided for relationships between policy makers, the Air Force organization, ADLS program office and technology mechanism, and learners. Counterproductive activity and challenging areas of ADLS social policy training were identified for improvement in light of meeting and balancing both organizational and learner needs.

Recommendations

My first recommendation regards terminology for social policy training in ADLS. Though excessive political correctness should be avoided, words matter. ADLS should place all social policy training under the category "Social Policy." This researcher recommends the removal of social policy training from Miscellaneous and All Category descriptions. The continued use of "ancillary" which is defined as "subordinate; subsidiary" or "non-job" terminology of social policy training should be eliminated. The danger is that Air Force social policy training will be perceived as unimportant or secondary. In doing so, the intrinsic value of social policy messages risks being marginalized. The bottom line is that social policy training is important to the Air Force and should be promoted as such. Air Force social policy training is not a task to achieve, it is an Air Force mission enabler. Terminology should be changed to reflect this importance.

This researcher recommends more measures of training competence for ADLS social policy training. Training activity without measured meaningful results is self defeating.

Measures should capture awareness, understanding, social policy value assessment, and ability to apply social policy in real world scenarios. Expectations of required competence and level of mastery for social policy issues should be related to Air Force personnel rank progression and

responsibilities. Fundamental levels of competency should be augmented during schoolhouse or online professional military education as part of leadership development.

As part of making measurement meaningful, ADLS social policy training competence measures should be compared and correlated with Air Force social phenomena. The Air Force should attempt to connect training data measures of social policy competence to personnel behavior. Social phenomena rates that are usually couched in negative events like suicide, violence, and theft could cast a shadow on positive programs. However, meaningful analysis can provide insight into value of training, degrees of learning, and feedback for improvement efforts.

The Air Force should promote ADLS as an educational resource and reference site for social issues and leadership development and not just as a source of training tasks. ADLS should not be seen as just a required training website but a portal for Air Force strategic focus on important topics regarding personnel wellness, healthy human interactions, family support, and overcoming social challenges.³⁰ Ideally, training provided could be synchronized with scheduled "Wingman" days for local leadership involvement and emphasis. Relevant service independent training courses on leadership and professional development already developed on the Army's Distributed Learning System and Navy eLearning should be sought and made available.

In addition, three existing concepts, already being used in other Air Force arenas, are recommended as valuable for future organizational use in social policy learning endeavors.

The first concept is the Balanced Scorecard approach to strategic planning and management (shown in Figure 9). The Balanced Scorecard approach promotes a measurement-based system for implementing strategic vision from a balanced view of four perspectives: learning and growth, internal business processes, customer, and financial viewpoints.³¹ Use of

this concept in the area of ADLS social policy content development and execution could help balance focus for all ADLS social policy stakeholders.

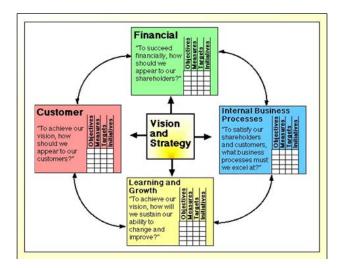


Figure 9: Balanced Scorecard Strategic Planning and Management System (Reprinted from Balanced Scorecard Institute, adapted from Kaplan & Norton's *The Balanced Scorecard*, http://www.balancedscorecard.org/BSCRResources/AbouttheBalancedScorecard/tabid/55/Default.aspx)

The second concept is the Air University's "Cross-Culturally Competent Airmen" model that is currently being employed by the Air Force Culture and Language Center to develop foreign culture and language capabilities. Cross-Cultural Competence is described as "the ability to quickly and accurately comprehend, then appropriately and effectively act, to achieve the desired effect in a culturally complex environment."

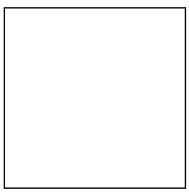


Figure 10: Cross-Cultural Competence Model

(Reprinted from US Air Force Culture and Language Center website, http://www.culture.af.edu/)

Figure 10 depicts an individual Airmen's ability to exert influence "over mission success and institutional health" by developing "ability to negotiate, build relations and communicate across cultural differences." Currently, this effort is externally focused toward practically preparing Airmen for expeditionary operations in foreign countries. However, the same principles and educational structure could be easily adapted for an internally focused integrated program for Air Force socio-cultural development, training, and education.

The third concept is the OODA loop.³⁴ Air Force Colonel John Boyd's OODA (or Observe, Orient, Decide, and Act) loop has long been used to model the decision making process and is applied as an important concept in military strategy. Most often, OODA loops are used to depict competitive engagements. Achieving a faster OODA cycle than an enemy results in an ability to observe and react to unfolding events more rapidly than an opponent, thereby "getting inside" an enemy's decision cycle and producing a competitive advantage. However, fundamentally the OODA loop as a conceptual model is inherently neutral. Essentially, OODA loops represent the information system processes of a complex adaptive system.³⁵ That is, OODA loops can be applied to a complex adaptive learner acquiring personal knowledge in cognitive and affective domains just as appropriately as they can be applied to survival, adaptation, and competition. This makes the OODA loop a desirable model or meta-model for social learning processes.

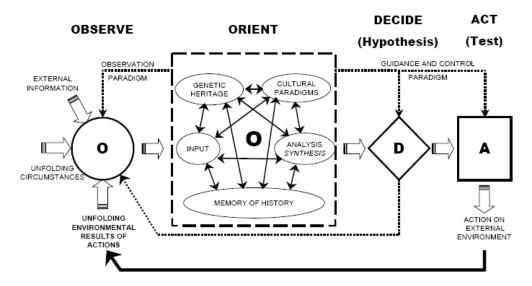


Figure 11: Boyd's OODA Loop, adapted by William P. Hall (Reprinted from William P. Hall, "Organizational Autopoiesis and Knowledge Management," 2003, 5)

This broad application of the OODA loop as a model for learning falls in line with Dr. Frans Osinga's assessment that common interpretations are "incomplete" and that "Boyd's OODA loop concept, as well as his entire work, are more comprehensive, deeper and richer than the popular notion of 'rapid OODA looping' his work is generally equated with." Excellent background of John Boyd's OODA loop grounding in scientific theory is found in Osinga's *Science, Strategy, and War: The Strategic Theory of John Boyd.* 37

Finally, this researcher recommends additional research into how distributed learning environments can be improved to account for affective learning considerations (policy awareness and socialization, learner motivation, emotional relationships with social issues, and enculturation of values) and not just information transfer. Multimedia theory can be further investigated to determine optimal organization and presentation of online information regarding social issues. Distributed learning technologies that improve learner ability to control their own learning, ask questions, provide feedback, and demonstrate competence for real world scenarios should be pursued.

Appendix A

Summary Analysis Tables

 Table 2: Air Force ADLS Social Policy "Success" is Relative to Participant

Air Force ADLS Social Policy Participant	Role (Social Policy "verb")	Social Policy Goals (Successful Outcomes)	Relative Success Measures
Social Policy Maker	CreateProvide authoritySpecify vision	Social policy that is knownSocial policy vision becomes reality	 Effectiveness of achieving policy maker goals Efficiency in achieving policy maker effectiveness
Air Force Organization	AdoptPromoteTrackEnforce	 Policy maker mandates and requirements are met Air Force is organized, trained (and educated), ADLS equipped, and mission ready on social policies Air Force personnel are successful with social issues in the real world 	 Effectiveness of achieving Air Force organization goals Efficiency in achieving Air Force organization effectiveness
ADLS Program	TrainMake available	 Air Force organization requirements are met Learners are trained on social policy via ADLS ADLS media and mechanism is available "anywhere, anytime" 	 Effectiveness of achieving ADLS Training and Education goals Efficiency in achieving ADLS program effectiveness
Learner	LearnInternalizeLive out in behavior	 Air Force organization requirements are met Social policy is learned on ADLS (learner is trained) Social policy messages are internalized Learner is successful with social issues in the real world 	 Effectiveness of achieving learner goals Efficiency in achieving learner effectiveness

Table 3: Summary of ADLS Social Policy Makers, Mandates, and Effectiveness

ADLS Social Policy Course (Est Duration)	Social Policy Maker	Social Policy Area	Directive Authority	DoD Social Policy Mandate (Goal) with Regard to Social Policy Training & Education	Intended ADLS Course Audience	ADLS Frequency / Kind of Test	"Effective" for Social Policy Maker mandate?
Communication Skills (2 hrs) Conflict Management (2 hrs) Cross-Cultural Communication (3 hrs) Effective Feedback (1 hr) Ethical Decision- making (3 hrs) Group Development Theory (2 hrs) Perceptions (3 hrs) Socialization (4 hrs)	Under Secretary of Defense for Personnel and Readiness	Equal Opportunity (EO) Equal Employment Opportunity (EEO) Human Relations Sexual Harassment Participation in Extremist Activities	DoD Directive (DODD) 1350.2.5.2 (DEOMI mandate)	DoDD 1350.2: "Enhance combat and operational readiness by enhancing unit and organizational leadership and cohesion. This is accomplished by developing and conducting education and training in the administration of military, EO, EEO, and human relations"	Open to all ADLS members (not mandatory)	No mandatory ADLS frequency / Comprehension	Yes. Effective as providing "educational materials for EO, EEO, and human relations education"
Annual Ethics Training for OGE 450/SF 278 Filers (1 hr)	Secretary of Defense (DoD General Counsels are Designated Agency Ethics Officials)	Ethics	DoD Directive 5500.07 "Standards of Conduct" DoD 5500.7-R, "Joint Ethics Regulation"	DODD 5500.07: "Ethics training is conducted as required within the DoD Component command or organization; DoD 5500.7-R: Ethics training is "minimum of 1 hour of official duty time"	Initial for all new DoD personnel; Annual for specific positions (OGE 450/SF 278 files, contract officers)	One time briefing for all new DOD personnel on entry. Annual requirements for specific positions / No test	Yes. DoD mandates are met to have 1 hour of ethics training for initial DoD employees and annual OGE 450/SF 278 filers

Law of Armed Conflict (1 hr)	International Treaty (Geneva Conventions) Congress Deputy Secretary of Defense Secretary of the Air Force	Law of War Law of Armed Conflict	Geneva Conventions, Articles 82, 87, 127, 130, 144, and 147 Goldwater-Nichols Act of 1986 DoD Directive (DODD) 2311.01E, "Law of War Program" Air Force Policy Directive (AFPD) 51-4, "Compliance With the Law of Armed Conflict (LOAC)" Air Force Instruction 51-401, "Training and Reporting to Ensure Compliance with the Law of Armed Conflict"	Geneva Conventions, Article 82 mandates to signatory states a responsibility to instruct the law of armed conflict to their respective forces and requires this instruction to the point of familiarity for all ranks and positions. Geneva Conventions, Article 87 calls for commanders to ensure their respective forces are trained in, and adhere to, the law of armed conflict. Geneva Conventions, Articles 127, 130, 144 and 147 place a duty on each signatory to train military forces (disseminate the text of the Convention), "as widely as possible in their programmes of military and civil instruction." (sic); Goldwater-Nichols Act of 1986 mandates service secretaries to provide trained forces to the combatant commands; DoD Directive (DODD) 2311.01E requires heads of the DoD components to "institute and implement effective programs to prevent violations of the law of war (also known as LOAC), including law of war training and dissemination."	All Airman and emergency essential civilian personnel	1 hour for general population via ADLS. More time for specialized training groups e.g. AFOSI, SF, Medical Personnel and Chaplains / 7 intermediate quizzes and final competency test (70% criteria)	Yes. Geneva Convention, Congress, DoD, and CSAF mandates are met
No Fear Act Training (30 min)	Congress	Discrimination and Whistleblower Protection Laws Equal Opportunity and Treatment Sexual Harassment	Section 202 of the "Notification and Federal Employee Antidiscrimination and Retaliation Act of 2002" (No FEAR Act)	Section 202 of the No FEAR Act requires federal agencies provide periodic training of employees regarding their rights and remedies under the anti-discrimination and whistleblower protection laws.	Federal employees, supervisors, managers and military supervisors of civilian employees	Every 24 months (no exemptions) / Final competency test (70% criteria)	Yes. Congress mandate to train and inform federal employees is met

Human Relations (30 min)	The President and Under Secretary of Defense for Personnel and Readiness (for CTIP) Secretary of the Air Force (for AFI 44- 154)	Combating Trafficking in Persons Suicide Awareness Violence Prevention	National Security Presidential Directive (NSPD)- 22, "Combating Trafficking in Persons", 16 Dec 2002 DoDI 2200.01, 16 Feb 2007 "Combating Trafficking in Persons (CTIP)" Air Force Instruction (AFI) 44-154, 03 Jan 2003, "Suicide and Violence Prevention Education and Training"	DoDI 2200.01: "Educate all Service members and DoD civilians annually on the worldwide trafficking menace, national TIP policy, overseas theater TIP policy, and attendant personal responsibilities consistent with DoD core values and ethical standards"; AFI 44-154: "Unit commanders will ensure all personnel complete, during the 15-month Air Expeditionary Force (AEF) training cycle, a mandatory suicide prevention and violence awareness education program. Completion of program training will be documented and a tracking mechanism developed to ensure training is accomplished."	Mandatory for all Air Force military and US Citizen AF employees; optional for contractors and foreign employees (local nationals)	Mandatory annually / No test	Yes. Provides documented annual training (broad mandate)
Homosexual Policy Training for CCs, JAs, and SF Personnel (1 hr)	Under Secretary of Defense for Personnel and Readiness	1 11011	Secretary of Defense (Personnel & Readiness) memorandum "Implementation of Recommendations Concerning	USD (P&R) Memo: "Ensure that Service Inspectors General include as an item of specific interest in their inspections the training of those	Commanders, Judge Advocates, and Security Force Investigators	Annually for commanders, judge advocates, and investigators / No test	Yes. Provides annual training (broad mandate)
Homosexual Policy for Managers (1 hr)		Homosexual policy	Homosexual Conduct Policy," 12 Aug 1999 CSAF memorandum "Homosexual Policy Guidance," 10 March 2000	charged with application and enforcement of the policy on homosexual conduct – i.e., commanders, attorneys, and investigators"	Air Force Supervisors	One time training for AF supervisors / No test	Yes. Provides training (broad mandate)

Appendix B

Effectiveness & Efficiency Success Measures for ADL Systems and Organizations

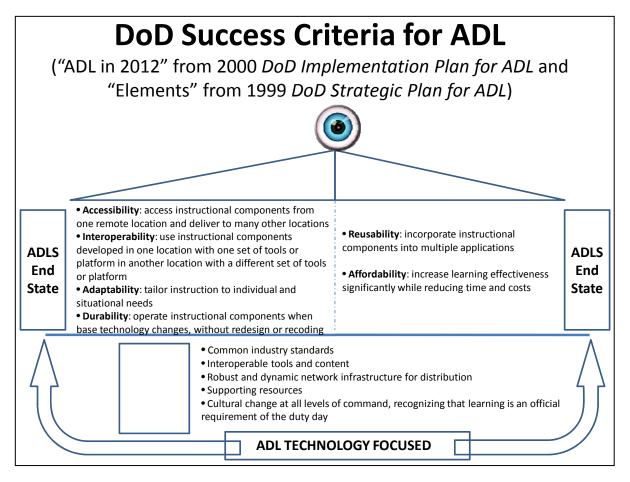


Figure 12: DoD Success Criteria for ADL

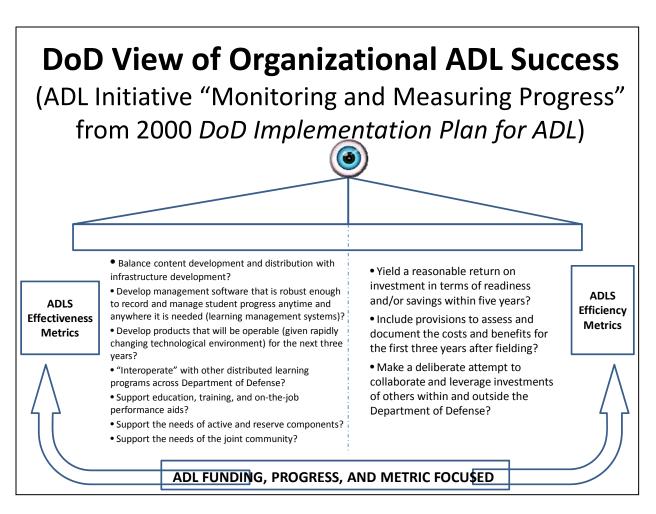


Figure 13: DoD View of Organizational ADL Success

Notes

- ¹ Air Education and Training Command, *On Learning: The Future of Air Force Education and Training*, United States Air Force White Paper (Maxwell AFB, AL: Air University Press, January 2008), 19.
- ² United States General Accounting Office, *Military Transformation: Progress & Challenges for DOD's Advanced Distributed Learning Programs*, US GAO Report to Congressional Committes (Washington, DC: US General Accounting Office, February 2003), 3.
- ³ Department of Defense, *Department of Defense Strategic Plan for Advanced Distributed Learning*, DoD Report to the 106th Congress (Washington, DC: Office of the Under Secretary of Defense for Personnel and Readiness, April 1999), 10.
- ⁴ Executive Order 13111, Using Technology to Improve Training Opportunities for Federal Government Employees, 12 January 1999.
 - ⁵ E-mail interview from AETC/A3I
- ⁶ Air Education and Training Command, "Advanced Distributed Learning Service...into the Future," powerpoint brief presented at AETC Symposium, 15-16 January 2009, slide 8.
 - ⁷ Ibid, slide 6.
- ⁸ Wikepedia, "Social Policy," website http://en.wikipedia.org/wiki/Social_policy (accessed 21 Jan 2009). Social policy definition was adapted by the researcher in order to better clarify and delineate roles of social policy maker and social policy executor.
- ⁹ Mary Forehand, "Bloom's Taxonomy: Original and Revised," website, 2005, in "Emerging Perspectives on Learning, Teaching, and Technology," http://projects.coe.uga.edu/epltt/(accessed 21 Jan 2009).
- ¹⁰ R.W. Picard et al., "Affective learning a manifesto," *BT Technology Journal* 22, no. 4 (October 2004): 253.
- ¹¹ Chip Heath and Dan Heath, *Made to Stick: Why Some Ideas Survive and Others Die* (New York, NY: Random House, 2007), 165-203.
- ¹² Edgar H. Schein, *Organizational Culture and Leadership*, Third Edition (San Francisco, CA: Jossey-Bass, 2004), 3.
 - ¹³ Ibid, 1, 10, & 22.
- ¹⁴ M. Neo and K. Neo, "Innovative Teaching: Using Multimedia in a Problem-based Learning Environment," *Educational Technology & Society Education* 4, no. 4 (2001): 20.
- ¹⁵ R.E. Mayer, *Multimedia Learning*, (Cambridge, United Kingdom: Cambridge University Press, 2001), 184. See Mayer's seven research-based principles for the design of multimedia messages: Multimedia Principle, Spatial Contiguity Principle, Temporal Contiguity Principle, Coherence Principle, Modality Principle, Redundancy Principle, and Individual Differences Principle.
- ¹⁶ Lorraine Sherry, "Issues in Distance Learning," *International Journal of Educational Telecommunications* 1, no. 4 (1996): 337-365.
- ¹⁷ Patti Shank, "The Value of Multimedia in Learning," website for Adobe Design Center, http://www.adobe.com/designcenter/thinktank/valuemedia/The_Value_of_Multimedia.pdf, 12.
- ¹⁸ DoD Directive (DODD) 5100.1, *Functions of the DoD and Its Major Components*, 1 August 2002. This directive states that Military Services are responsible for developing service training, doctrines, procedures, tactics, and techniques.

Notes

- ¹⁹ Air Education and Training Command, "Education and Training Course Announcement" website, https://etca.randolph.af.mil/. Law of Armed Conflict (LOAC) page refers to Geneva Convention Article 82 legal responsibility regarding proper instruction.
- ²⁰ R.W. Picard et al., "Affective learning a manifesto," *BT Technology Journal* 22, no. 4 (October 2004): 255.
 - ²¹ SECAF & CSAF Mission Statement and Priorities, Letter to Airmen, 15 September 2008.
- ²² USAF, 2008 Air Force Strategic Plan, October 2008, 7-8; SECAF & CSAF Mission Statement and Priorities, Letter to Airmen, 15 September 2008.
- ²³ DoD, Department of Defense Strategic Plan for Advanced Distributed Learning, DoD Report to the 106th Congress (Washington, DC: Office of the Under Secretary of Defense for Personnel and Readiness, April 1999), 11.
- ²⁴ United States Air Force, "Roll Call Ancillary Training: The Air Force thinks Airmen need to spend less time on non-job related training," Air Force website archive, http://www.af.mil/shared/media/document/AFD-070209-083.pd, week of 9-15 February 2007 (accessed 21 January 2009).
- ²⁵ Carl H. Builder, *The Masks of War* (Baltimore and London: The Johns Hopkins University Press, 1989), 19.
- ²⁶ Harvard Business School, "The Social Life of Information," Working Knowledge for Business Leaders website archive, http://hbswk.hbs.edu/archive/1403.htm, 28 March 2000 (accessed 21 January 2009).
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- ²⁸ AETC, On Learning: The Future of Air Force Education and Training, USAF White Paper (Maxwell AFB, AL: Air University Press, January 2008), 10.
 - ²⁹ Ibid. 11.
- The Navy approach to social policy training appears different in providing scheduled training content and personnel issue presentations as part of an overall training campaign. This is illustrated at the following memo: http://www.npc.navy.mil/NR/rdonlyres/DE3A7ADC-32C3-494E-9A05-8C94F429CBBE/0/NAV09033.txt. The memo also shows measurement of social policy training competence and flexibility in how personnel can be considered "trained."
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 - ³³ Ibid.
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³⁷ Ibid, 20-127.

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